National Institute of Environmental Health Sciences

Climate change education and the ecological footprint

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Abstract:

Global warming has become one of the most important scientific, political, and social issues of our era. In designing an effective mitigation strategy, it is clear that public education must play an important role. This study looks at various components of climate change literacy within a cohort of university students and investigates the impact of action-oriented learning on student understanding. Results from questionnaires given to primarily nonscience students enrolled in weather and climate courses are used to examine student knowledge of climate change. In agreement with prior research, this study finds that significant student misconceptions exist regarding the causes of global warming and the relationship between global warming and ozone depletion. Most students seem to conhect global warming only with visible poilution, such as exhaust from either a car or factory, while discounting more indirect emissions such as from electricity use and through product or food consumption. The authors then explore how a learning activity designed around the "ecological footprint" affects student ideas about their personal energy use and connections with global warming. The results show that a relatively simple learning activity that personally engages the student improves understanding of the connection between personal energy use and global warming. This work suggests that similar curricula, employing methods of personal engagement and social activism, be further developed to aid in the teaching of climate change.

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Resource Description

Communication: ☑

resource focus on research or methods on how to communicate or frame issues on climate change; surveys of attitudes, knowledge, beliefs about climate change

A focus of content

Other Communication Audience: University students

Exposure : ☑

weather or climate related pathway by which climate change affects health

Sea Level Rise, Solar Radiation, Unspecified Exposure

Geographic Feature: ☑

resource focuses on specific type of geography

None or Unspecified

Geographic Location:

resource focuses on specific location

United States

Health Impact:

specification of health effect or disease related to climate change exposure

Health Outcome Unspecified

Intervention:

strategy to prepare for or reduce the impact of climate change on health

A focus of content

Mitigation/Adaptation:

mitigation or adaptation strategy is a focus of resource

Mitigation

Resource Type:

format or standard characteristic of resource

Research Article

Timescale:

time period studied

Time Scale Unspecified